

11/3 HW: Review sheet  
Due Tuesday

## MIXED FACTOR REVIEW

NAME \_\_\_\_\_

## Factoring All Polynomials

1.  $9x^2 - 4$

$$(3x-2)(3x+2)$$

2.  $x^3 + 64$

3.  $200x^2 - 50 \rightarrow 50(4x^2 - 1)$

4.  $7x^3 + 14x^2 + 7x$

$$7x(x^2 + 2x + 1)$$
  
$$7x(x+1)(x+1)$$

5.  $2x^3 - 4x^2 - 3x - 6$

Prime

6.  $3x^2 + 81$

$$50(2x-1)(2x+1)$$

7.  $2x^2 - x - 3$

8.  $x^2 + 3x - 10$

9.  $x^2 + 8x + 16$

10.  $4x^2 - 20x + 25$

$$4x^2 - 20x + 25$$
  
$$4x^2 - 10x - 10x + 25$$
  
$$2x(2x-5) - 5(2x-5)$$
  
$$(2x-5)(2x-5)$$
  
$$x^2 - 3x^2 - 5x + 15$$
  
$$x^2(x-3) - 5(x-3)$$
  
$$(x-3)(x^2-5)$$

11.  $2x^2 - 5x + 2$

12.  $3x^2 - 11x - 20$

13.  $x^3 - 3x^2 - 5x + 15$

14.  $3x^4 - 11x^2 - 20$

15.  $4x^2 - 49$

16.  $x^2 - 18x + 81$

17.  $16x^2 - 81$

18.  $2x^3 - 3x^2 + 4x - 6$

19.  $8x^3 - 27y^3$

20.  $x^4 - 4x^2 + 3$

21.  $12abx^2 + 6a^2bx^3 - 30ab^3$

$$6ab(2x^2 + ax^3 - 5b^2)$$

HW: check

$$x^2 \textcircled{A} + 3x - 28$$

$$(x - 4)(x + 7)$$

$$5x^2 - 22x - 15$$

$$\begin{array}{r|l} 5x^2 - 25x & +3x - 15 \\ \hline 5x(x-5) & +3(x-5) \end{array}$$

$$(x-5)(5x+3)$$

$$AC = -75$$

$$3, -25$$

\* Parenthesis will be the same

22.  $5a^2 - 25a$

23.  $3a^4b^2m - 75a^3bm^4$

24.  $3x^2 - 48$

25.  $8x^3 - 64$

26.  $x^2 + 3x - 18$

27.  $200x^2 - 50$

28.  $18x^3 + 30x^2 + 3x + 5$

29.  $3x^3 + 24$

30.  $10x^3 - 20x^2 - 2x + 4$

31.  $5x^2 - 32x - 21$

32.  $4x^2 + 20x + 9$

33.  $15x^3 - 25x^2 + 75x - 125$

34.  $x^2 + 15x + 56$

35.  $28x^3 - 7x$

36.  $216x^3 + 1$

37.  $12x^2 - 44x + 7$

38.  $6x + 21$

39.  $16x^8y^4 - 81z^4$

40.  $18x^3 - 2x^2 + 27x - 3$

41.  $32x^3 - 4$

42.  $8x^2 + 10x - 25$

43.  $x^2 + 5x - 36$

44.  $2x^2 + 20x + 48$